ABSTRACT

An apparatus comprising a substrate; and a platform elevated above the substrate and supported by curved flexures. The curvature of said flexures results substantially from variations in intrinsic residual stress within said flexures. In one embodiment the apparatus is a deformable mirror exhibiting low temperature-dependence, high stroke, high control resolution, large number of degrees of freedom, reduced pin count and small form-factor. Structures and methods of fabrication are disclosed that allow the elevation of mirror segments to remain substantially constant over a wide operating temperature range. Methods are also disclosed for integrating movable mirror segments with control and sense electronics to a produce small-form-factor deformable mirror.